

## CURRICULUM VITAE

### **Markus Bill**

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**LANGUAGES:** French, English and German

**CITIZENSHIP:** Switzerland

### **EDUCATION**

- 1998 Ph. D. Sciences**, University of Lausanne, Switzerland  
 Dissertation title: Isotopic, chemical and biostratigraphic data from the *Gets and Prealps medianes rigides nappes*: constraints for oceanisation and tectonic evolution of the western Alps.
- 1992 Master diploma in Earth Sciences**, University of Lausanne, Switzerland  
 Dissertation title: Evolution sédimentologique et isotopique des Couches de Liesberg  
 Supervisors: Prof. Peter O. Baumgartner (Institute of Geology and Paleontology) Prof. Johannes Hunziker (Institute of Mineralogy and Geochemistry).

### **PROFESSIONAL APPOINTMENTS**

- 2007-14** Staff Scientific Engineer Associate, Lawrence Berkeley National Laboratory, United States.
- 2006** Director of Laboratories, Kansas State University, United States.
- 2005** Independent Consultant Biogeochemist.
- 2003-04** Supervisor and Project manager of groundwater, soil and air pollution division. Environmental Agency, Jura Canton, Switzerland.
- 2001-02** Post-graduate Researcher, University of California at Berkeley, United States.
- 2000** Visiting Postdoc, University of California at Berkeley, United States
- 1998-99** Post-doctoral Researcher, Eberhard-Karls-University at Tübingen, Germany
- 1993-98** Postgraduate Assistant, University of Lausanne, Switzerland
- 1991-93** Graduate Assistant, University of Lausanne, Switzerland

**1991-92** Geologist, Centre de Recherches Scientifiques Fondamentales et Appliquées du Canton du Valais, Switzerland

## PAST AND PRESENT FUNDING

### RESEARCH PROJECTS

*At Lawrence Berkeley National Laboratory my running costs as salaries and laboratory maintenance are funded through programs of the Office of Science, United States Department of Energy.*

- 2012-2014** **Next-Generation Ecosystem Experiment (NGEE)** Sponsored by the Office of Biological and Environmental Research within the U.S. Department of Energy's Office of Science.
  - 2010-2014** **Microbial Enhanced Hydrocarbon Recovery (MEHR).** Funded by a subcontract from the University of California at Berkeley, Energy Biosciences Institute to Lawrence Berkeley National Laboratory under its U.S. Department of Energy contract DE-AC02-05CH11231, and by the University of Oklahoma Research Foundation.
  - 2010-2014** **Environmental remediation and water resources.** Funded by Assistant Secretary of the Office of Environmental Management, Office of Science and Technology, Environmental Remediation Science Program, of the U.S. Dept. of Energy under Contract DE-AC02-05CH11231.
  - 2010-2013** **Gulf of Mexico oil spill (Deepwater Horizon oil spill).** Funded by a subcontract from the University of California at Berkeley, Energy Biosciences Institute to Lawrence Berkeley National Laboratory under its U.S. Department of Energy contract DE-AC02-05CH11231, and by the University of Oklahoma Research Foundation.
  - 2009-2010** **Integrated Approach to Use Natural Chemical and Isotopic Tracers to Estimate Fracture Spacing and Surface Area in EGS Systems.** Funded by Assistant Secretary for Energy Efficiency and Renewable Energy, Geothermal Technologies Program of the U.S. Department of Energy under Contract No. DE-AC02-05CH11231.
  - 2008-2009** **Tracking Carbon Isotope Compositions of Chlorinated Ethenes during Field Bioaugmentation of *Dehalococcoides sp.*** Funded by CDM, 555 17th Street, Suite 1100, Denver, Colorado 80202. Principal investigator: Mark Conrad, Lawrence Berkeley National Laboratory.
  - 2007-2009** **In situ sequestration of <sup>90</sup>Sr and Uranium in the vadose zone through microbial precipitation of phosphate minerals.** Funded by U.S. Department of Energy, Office of Science, Environmental Remediation Science Program, project no LAB 06-12. Principal investigator: Mark Conrad, Lawrence Berkeley National Laboratory.
  - 2007-2009** **Coupled biogeochemical process evaluation for conceptualizing trichloroethene co-metabolism.** Funded by U.S. Department of Energy, Office of Science, Environmental Management Science Program, project no LAB 05-12. Principal investigator: Frederick Colwell, Idaho National Laboratory.
- At Kansas State University laboratory costs were funded by grants from the National Science Foundation.*
- 2006** **Diversity of ericoid mycorrhizal fungi and its significance in plant nitrogen acquisition in the arctic.** Funded by National Science Foundation – Office of Polar Programs, project no OPP-0221489. Principal investigator: Ari Jumpponen, Kansas State University.

**Collaborative research: functional significance of "dark septate" endophytes in grassland and Meadow ecosystems of western north America.** Funded by: National Science Foundation project no DEB 0344838. Principal investigator: Ari Jumpponen, Kansas State University.

**Characterization of the energy acquisition by sub-adult Colorado pikeminnow (*Ptychocheilus lucius*) in the San Juan River, New Mexico.** Funded by: New Mexico Department of Game and Fish. Principal investigator: Keith Guido, Kansas State University.

**Trophic relationships among Colorado Pikeminnow (*Ptychocheilus lucius*) and its prey in the San Juan River.** Funded by: US Bureau of Reclamation (Department of the Interior). Principal investigator: Keith Guido, Kansas State University.

**A multidisciplinary test of mutualistic benefits fungal endophytes provide their host plants.** Funded by: National Science Foundation, project no. CRUI 0330840. Principal investigator: Thomas L. Bultman, Hope College, Holland, (Michigan).

**CAREER: Assessing the effects of anthropogenic N-deposition on the carbon cycling of southern Californian semi-arid shrublands.** Funded by NSF-Division of Environmental Biology, project no DEB-0133259. Principal investigator: George Vourlitis, California State University, San Marcos.

**N-retention in terrestrial ecosystems: Implications for eutrophication and human health.** Funded by National Institutes of Health-NIGMS-SCORE, project no S06 GM 59833. Principal investigator: Victor Rocha, California State University, San Marcos.

- 2000-02** **An isotopic approach for determining the industrial fraction of total CH<sub>3</sub>Br source to the atmosphere.** Funded by National Aeronautic and Space Administration Upper Atmosphere Research Program (NASA), project no NAG5-7173, NAG5-4023. Principal investigators: Prof. Allen H. Goldstein and Prof. Donald J. DePaolo, University of California, Berkeley.
- 2000-02** **An isotopic approach for determining the industrial fraction of total CH<sub>3</sub>Br source to the atmosphere.** Funded by National Science Foundation Atmospheric Chemistry Program Award (NSF), project no ATM-9729110. Principal investigator: Prof Allen H. Goldstein and Prof. Donald J. DePaolo, University of California Berkeley.
- 1998-99** **Establishment of Equipment for Gas-Chromatography Isotope Ratio Mass Spectrometry Analysis at Queen's University.** Funded by Engineering and Physical Sciences Research Council (EPSRC), project no JREI GR/L85183. Principal investigator: Robert M. Kalin, Department of Civil Engineering and Questor Center, Queen's University Belfast.
- 1998-99** **Laboratory studies of microbial degradation of contaminants using stable isotope methods.** Funded by Engineering and Physical Sciences Research Council (EPSRC), project no ROPA GR/M26374. Principal investigator: Robert M. Kalin, Department of Civil Engineering and Questor Center, Queen's University Belfast (UK).
- 1994-97** **Mineralogical, geochemical and isotopic investigations of petrological and environmental problems.** Funded by Swiss National Science Foundation (SNSF), project no 2000-040756. Principal investigator: Johannes Hunziker, Department of Mineralogy and Geochemistry, University of Lausanne, (Switzerland).

- 1992-98 Isotope geology and tectonics in the Prealps.** Funded by Swiss National Science Foundation (SNSF), project no 2100-045789. Principal investigator: Henri Masson, Department of Geology and Paleontology, University of Lausanne (Switzerland).

## GRANTS

- 2014 Carbon cycle variations on marine ecosystems for understanding the consequences of the present increase of atmospheric CO<sub>2</sub>.** Sponsored by the Department of Earth Sciences of the University of Cadiz (Spain). Principal investigator: Markus Bill. Amount granted \$ 13,250. Duration 01.01.2014 – 31.08.2014.
- 2002-05 Dynamic of extinctions and radiations of pelagic organisms in connection with eustatic and paleoceanographic variations during the Jurassic and Cretaceous in the Western Tethys.** Funded by Dirección General de Investigación Científica y Técnica (DGICYT), Spain, project no. BTE-2001-3020. Principal investigator Prof. José Sandoval. Co-principal investigators Dr. Markus Bill, Prof. Miguel Company Sempere, Prof Luis O'Dogherty. Amount granted € 72,572. Duration 01.09.2002 - 30.09.2005.
- 2001-02 Stable carbon isotope approach for understanding the methyl bromide budget of the atmosphere.** Funded by Swiss National Science Foundation (SNSF), project no 8220-064670. Principal investigator: Markus Bill. Amount granted CHF 176,330. Duration 01.07.2001 - 31.12.2002.
- 2000 An isotopic approach for determining the industrial fraction of total CH<sub>3</sub>Br source to the atmosphere.** Funded by Novartis Foundation. Amount granted CHF 12,000. Principal investigator: Markus Bill. Duration 01.01.2000 - 31.12.2000.
- 1998-99 Isotope geochemistry application (C, S and N) to the quantification of organic pollutants.** Funded by Swiss National Science Foundation (SNSF), project no. 81LA-537663. Amount granted CHF 41,000. Principal investigator: Markus Bill. Duration 01.09.1998 - 31.08.1999
- 1998-99 Recherche en géologie sur l'impact de pollution d'hydrocarbures à Tübingen.** Funded by Société Académique Vaudoise. Principal investigator: Markus Bill. Amount granted 5,000. Duration 01.09.1998 - 31.08.1999.

## TEACHING EXPERIENCE

### PROFESSIONAL LECTURES

Invited speaker at University of Basel, Switzerland. *Stable carbon isotopes: biogeochemical cycle markers of organic halogenated compounds*. February 16, 2006.

Invited speaker at Conferences of Western Switzerland Universities at the University of Lausanne, Switzerland. *Hydrocarbons and halogens in the atmosphere and in groundwater: origin and fate of the components*. October 12, 2005.

Invited speaker at Ecole Nationale Supérieure de Géologie, CRPG, Nancy, France. *Isotopes stables du carbone: marqueurs des cycles biogéochimiques de composés organiques halogénés*. May 11, 2005.

Invited speaker at University of Granada, Spain. Conference Chair: *Biogeochemical cycles of halogenated compounds associated to evolution?* October 13, 2004.

Invited speaker at Swiss Graduate School of Public Administration, Lausanne, Switzerland. *Contraintes sur l'assainissement de sites pollués*. January 28, 2003.

Invited speaker at Escuela Politécnica de Linares - University of Jaén, Spain. *Monitoring of halogenated compounds in the environment*. December 19, 2002.

Invited speaker at University of California, Berkeley. Postdoctoral Conference for Atmospheric Chemistry: *Carbon isotope variations correlated with the onset of oceanic spreading, extinction events and climatic changes*. July 31, 2001.

Invited speaker at University of Cadix, Spain. *Interprétation des analyses géochimiques en paléocéanographie*. June 14-15, 1999.

Invited speaker at Paleontoloski Institut, Academie de Sciences, ZRC SAZU Slovenia. *Carbon isotope fractionations of carbonate organisms*. Conference July 7, 1998.

## **COURSES AND CO-SUPERVISION OF GRADUATE STUDENTS**

### **(A) COURSES**

**Petrology and geochemistry**, University of Lausanne, Switzerland

4th year earth science students

Responsibilities: Taught laboratory analytical techniques for carbon, oxygen and hydrogen isotopes

Winter semester: 1991, 1992, 1993

**Structural Geology**, University of Lausanne, Switzerland

3rd year earth science students

Responsibilities: Analyze of geological map and construction of cross section in the Alps

Winter semester: 1993, 1994; 1995, 1996, 1997, 1998

**Tectonic**, University of Lausanne, Switzerland

4th year Earth science students

Responsibilities: Analysis of deformation and tectonic stress field

Winter semester: 1993, 1994; 1995, 1996, 1997, 1998

**Sedimentology of carbonate rocks**, University of Lausanne, Switzerland

3rd year Earth science students

Responsibilities: Textural analyze and identification of carbonate rock facies.

Winter semester: 1992

### **(B) FIELD COURSES**

**Sedimentology and geological mapping in the Jura Mountains**, University of Lausanne, Switzerland

1st year Earth science students

Duration: 2 weeks

Summer semester: 1996, 1999

**Geological mapping and structural analysis in the Western Alps (Switzerland)**, University of Lausanne, Switzerland

1st year Earth science students

Duration: 2 weeks

Summer semester: 1998

**Geological mapping and structural analysis in the Prealps (Switzerland)**, University of Lausanne, Switzerland

1st year Earth science students  
Summer semester: 1994, 1997

**Alpine cross section from Fribourg (Switzerland) to Aoste (Italy)**, University of Lausanne, Switzerland  
4th year Earth science students  
Duration: 2 weeks  
Summer semester: 1995

**Sedimentology of Liesberg Beds, Jura Switzerland**, University of Lausanne, Switzerland  
2nd and 3rd year Earth science students  
Duration: 1 day  
Summer semester: 1992, 1993

#### **(C) CO-SUPERVISION OF GRADUATE STUDENTS**

Ph.D. candidate 2nd year, Department of Civil and Environmental Engineering, University of California, Berkeley: **Carbon monoxide emission associated with halogenated organic molecules degradation and electron donors**, Center for Isotope Geochemistry, Lawrence Berkeley National Laboratory, United States.  
Men Yujie  
Year: 2011

Ph.D. candidate 4th year, University of California, Berkeley: **Sulfur and carbon isotopes as indicators of bacterial sulfate processes**, Center for Isotope Geochemistry, Lawrence Berkeley National Laboratory, United States.  
Jenny Druhan  
Year: 2010

Ph.D. candidate 2nd and 3rd year, Department of Civil and Environmental Engineering, University of California, Berkeley: **Fate and transport of chlorinated solvents in the subsurface**, Center for Isotope Geochemistry, Lawrence Berkeley National Laboratory, United States.  
Katie Harding  
Year: 2009, 2010

Ph.D. candidate 4th year, University of California, Berkeley: **Tracing anaerobic microbial lignin degradation**, Center for Isotope Geochemistry, Lawrence Berkeley National Laboratory, United States.  
Dara Goodheart  
Year: 2009

#### **(D) CO-SUPERVISION OF UNDERGRADUATE STUDENTS**

Post Baccalaureate Fellow: **Analytical techniques in biogeochemistry**, Center for Isotope Geochemistry, Lawrence Berkeley National Laboratory,  
Jasmine Mason  
Year 2012, 2013

Post Baccalaureate Fellow: **Analytical techniques in biogeochemistry**, Center for Isotope Geochemistry, Lawrence Berkeley National Laboratory,  
Sam Chamberlain  
Year 2009

Academies Creating Teacher Scientists, U.S. Department of Energy (ACTS-DOE): **Isotopic Signatures and Water Cycling within a California Coastal Watershed**, Center for Isotope Geochemistry, Lawrence Berkeley National Laboratory, United States.

Kaye Kamp  
Year: 2008 and 2009

Master in Geology, University of Lausanne: **Contamination des Eaux Souterraines par des Composés organiques volatils dans la décharge industrielle de Bonfol - Apports de la géochimie isotopique**, Biogeoscience faculty, University of Lausanne, Switzerland.

Thierry Oppikofer  
Year: 2004

#### **(E) COLLABORATIVE RESEARCH WITH POST-DOCTORAL RESEARCHERS**

**Javier Ceja Navarro**, Post-doctoral Researcher, Department of Ecology of Lawrence Berkeley National Laboratory, Berkeley: **Nature's efficient lignocellulosic biorefineries**  
Year: 2012, 2013, 2014

**Wei-Qin Zhuang**, Post-doctoral Researcher, Department of Civil and Environmental Engineering, University of California, Berkeley: **Carbon metabolism and pathways in Dehalococcoides associated with dehalogenation of halogenated organic molecules**,  
Year: 2011 to 2013

**Jacob Bælum**, The Geological Survey of Denmark and Greenland, Copenhagen, Denmark and Center for Isotope Geochemistry, Lawrence Berkeley National Laboratory, United States: **Oil degradation potential and microbial community**.  
Year: 2010, 2011

#### **ANALYTICAL SKILLS IN EARTH SYSTEM SCIENCE**

**Equipment:** Isotope ratio mass spectrometry for H C, N, O and S stable isotope analyses (GV IsoPrime, Finnigan-Mat 251, Finnigan Delta S, ThermoFinnigan Delta Plus, ThermoFinnigan Delta Plus XL)

**Laboratories:** University of Lausanne, Tübingen Universität, Tübingen; Queen's University, Belfast; University of California, Berkeley; Kansas State University, Lawrence Berkeley National Laboratory.

**Years:** 1991 to 2014

**Equipment:** GC-IRMS/MSD for carbon stable isotopes, analyses of organic molecules in water and gas (GV IsoPrime and Finnigan Quadrupole MS Voyager).

**Laboratories:** Queen's University, Belfast; University of California, Berkeley; Lawrence Berkeley National Laboratory, Berkeley

**Years:** 1998 to 2002 and 2007 to 2014

**Equipment:** Gas chromatography: Hewlett Packard GC HP 6890 and MSD HP 5973, Varian 3400/FID, Finnigan Voyager GC/MSD, Shimadzu GC-14A for analyses of organic molecules in water, gas and aerosols

**Laboratories:** Tübingen Universität, Tübingen; Queen's University, Belfast; University of California, Berkeley, Kansas State University; Lawrence Berkeley National Laboratory

**Years:** 1998 to 2014

**Equipment:** Construction of inlet systems for gas chromatograph isotope ratio mass spectrometer (GC-IRMS)

**Laboratory:** University of California, Berkeley; Lawrence Berkeley National Laboratory

**Years:** 2000 to 2002 and 2007 to 2014

**Equipment:** Elemental analyzer for C, N and S stable isotopes in organic matter (EA 1110, CE instruments, ThermoQuest)

**Laboratory:** Kansas State University and Lawrence Berkeley National Laboratory, Berkeley

**Years:** 2006 to 2014

**Equipment:** ThermoFinnigan GasBench II for C and O isotopes of carbonate, gases and water.

**Laboratory:** University of Lausanne; Kansas State University

**Years:** 2005 to 2006

**Equipment:** GV Trace gas preconcentrator for C isotopes of DIC, CO<sub>2</sub>, CH<sub>4</sub> in waters and atmosphere and N and O isotopes in nitrates.

**Laboratory:** Lawrence Berkeley National Laboratory, Berkeley.

**Year:** 2007 to 2014

**Equipment:** Extraction lines for H, C, N, O, S, stable isotope analyses in waters, rocks, minerals, fluid inclusions and air.

**Laboratory:** University of Lausanne

**Years:** 1991 to 1998

**Equipment:** Laser ablation for O, stable isotope analyses in minerals

**Laboratory:** University of Lausanne

**Years:** 1993 to 1998

**Equipment:** isotope ratio mass spectrometry for radiogenic isotopes: VG sector in single collector mode (Rb-Sr and Sm), AVCO 9000 single collector (Nd and U-Pb), MAP <sup>40</sup>Ar/<sup>39</sup>Ar

**Laboratories:** University of Bern, Switzerland; University of Lausanne

**Years:** 1991 to 1998

## PUBLICATION LIST

### PEER REVIEWED PUBLICATIONS

Piceno, Y., Reid F., Tom L., Conrad M., Bill M., Hubbard C., Fouke B., Graff C., Han J., Stringfellow W., Hanlon, H., Hu P. Hazen T., Andersen G., 2014, Temperature and injection water source influence microbial community structure in four Alaskan North Slope hydrocarbon reservoirs. *Frontiers in Microbiology*, v. 5, 1–13, doi: 10.3389/fmicb.2014.00409.

Zhuang W.-Q., Yi S., Bill M., Feng X., Brisson V., Men Y., Tang Y.J., Conrad M.E., Zinder S.H., Alvarez-Cohen L., 2014, Acetyl-Coenzyme A cleavage in the incomplete Wood-Ljungdahl pathway impacts the growth of Dehalococcoides mccartyi, *Proceedings of the National Academy of Sciences*, v. 111, 6419–6424, doi: 10.1073/pnas.1321542111

Druhan, J.L., Bill, M., Lim, H.C., Wu C., Conrad M.E., Williams K.H., DePaolo D.J., Brodie E.L., 2014, A large column analog experiment of stable isotope variations during reactive transport: II. Carbon mass balance, microbial community structure and predation, *Geochimica et Cosmochimica Acta*, v. 124, 394–409, doi: 10.1016/j.gca.2011.03.031.

Harding K.C., Lee P.K.H., Bill M., Buscheck T., Conrad M.E., Alvarez-Cohen L., 2013, Effects of various growth conditions on stable carbon isotope fractionation of Trichloroethene (TCE) by tceA-containing Dehalococcoides mccartyi strains, *Environmental Science and Technology*, v. 47, 12342–12350 doi: 10.1021/es402617q.

Dubinsky E.A., Conrad M.E., Chakraborty R., Bill M., Borglin S.E., Hollibaugh J.T., Mason O.U., Piceno Y.M., Reid F.C., Stringfellow W.T., Tom L.M., Hazen T.C., Andersen G.L., 2013, Succession of Hydrocarbon-Degrading Bacteria in the Aftermath of the Deepwater Horizon Oil Spill in the Gulf of Mexico, *Environmental Science and Technology*, v. 47, 0860–10867, doi: 10.1021/es401676y.

Lewicki J.L., Hilley G.E., Dobeck L., McLing T.L., Kennedy B.M., Bill M., Marino B.D.V., 2012, Geologic CO<sub>2</sub> input into groundwater and the atmosphere, Soda Springs, ID, USA. *Chemical Geology*, v. 339, 61–70, doi:10.1016/j.chemgeo.2012.06.013.

Baelum J., Borglin S., Chakraborty M., Fortney J. L., Lamendella R., Mason O.U., 2012, Auer M., Zemla M., Bill M., Conrad M.E., Malfatti S.A., Tringe S.G., Holman H.-Y., Hazen T.C., Jansson J.K., Deep-sea bacteria enriched by oil and dispersant from the Deepwater Horizon spill. *Environmental Microbiology*, doi:10.1111/j.1462-2920.2012.02780.x.

Sandoval J., Bill M., Aguado R., O'Dogherty L., Rivas P., Morard, A., Guex J., 2012, The Toarcian in the Subbetic basin (southern Spain): bio-events (ammonite and nannofossils) and Carbon-isotope stratigraphy. *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 342–343, 40–63, doi:10.1016/j.palaeo.2012.04.028.

Bill M., O'Dogherty L., Baumgartner P.O., 2011, Dynamics of a paleoecosystem reef associated with oceanic change in carbonate sedimentary regime and carbon cycling (Oxfordian, Swiss Jura). *Palaios*, v. 26, 197–211, doi: 10.2110/palo.2010.p10-063r. **Featured Article for PALAIOS for the month.**

Hazen T.C., Dubinsky E.A., DeSantis T.Z., Andersen G.L., Piceno Y.M., Singh N., Jansson J.K., Probst, A., Borglin, S.E., Fortney, J. L., Stringfellow, W.T., Bill M., Conrad, M.E., Tom L.M., Chavarria, K.L., Alusi T.R., Lamendella R., Joyner D.C., Spier C., Baelum J., Auer, M., Marcin L. Zemla M.L., Chakraborty R., Sonnenthal E.L., D'haeseleer P., Holman H.-Y. N., Osman S., Lu Z., Van Nostrand J.D., Deng Y., Zhou J., Mason O.U., 2010, Deep-Sea Oil Plume Enriches Indigenous Oil-Degrading Bacteria. *Science*, v. 330, 204–208, doi: 10.1126/science.1195979.

- Conrad M.E., Brodie E.L., Radtke C.W., Bill M., Delwiche M.E., Lee M.H., Swift D.L., Colwell F.S., 2010, Field Evidence for Co-Metabolism of TCE Stimulated by Addition of Electron Donor to Groundwater. *Environmental Science and Technology*, v. 44, 4697–4704, doi: 10.1021/es903535j.
- Walker J.F., Johnson L. C., Simpson N.B., Bill M., Jumpponen A., 2010, Application of fungistics in soil reduces N uptake by an arctic ericoid shrub (*Vaccinium vitis-idaea*). *Mycologia*, v. 102, 822–834, doi: 10.3852/09-224.
- Sandoval J., O'Dogherty L., Aguado R., Bartolini A., Bruchez S., Bill M., 2008, Aalenian carbon-isotope stratigraphy: Calibration with ammonite, radiolarian and nannofossil events in the Western Tethys, *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 267, p. 115–137, doi: 10.1016/j.palaeo.2008.06.013.
- O'Dogherty L., Sandoval J., Bartolini A., L., Bruchez S., Bill M., Guex J., 2006, Carbon-isotope stratigraphy and ammonite faunal turnover for the Middle Jurassic in the South-Iberian margin, *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 239, 311–333, doi:10.1016/j.palaeo.2006.01.018.
- O'Dogherty L., Bill M., Gorican S., Dumitrica P., Masson H., 2005, Bathonian radiolarians from ophiolitic melange dating oceanic crust of the Alpine Tehtys (Gets nappe, Swiss-French Alps), *Micropaleontology*, v. 51, 425–485, doi: 10.2113/gsmicropal.51.6.425.
- Bill M., Conrad M. E., Goldstein A. H., 2004, Stable carbon isotope composition of atmospheric methyl bromide, *Geophysical Research Letters*, v. 31, doi: 10.1029/2003GL018639.
- Schüth C., Bill M., Barth J.A.C., Slater G., Kälin R.M., 2003, Carbon isotope fractionation during reductive dechlorination of TCE in batch experiments with iron samples reactive barriers, *Journal of Contaminant Hydrology*, v. 66, 25–37, doi:10.1016/S0169-7722(03)00026-3.
- Bill M., Rhew R. C., Weiss R. F., Goldstein A. H., 2002a, Carbon isotope ratios of methyl bromide and methyl chloride emitted from a coastal salt marsh, *Geophysical Research Letters*, v. 29, doi:10.1029/2001GL012946.
- Bill M., Miller L. G., Goldstein A. H., 2002b, Carbon isotope fractionation of methyl bromide during agricultural soil fumigation, *Biogeochemistry*, v. 60, 181–190, doi:10.1023/A:1019864024307
- Rhew R. C., Miller B.J., Weiss R. F., Bill M., Goldstein A. H., 2002, Environmental and biological controls on methyl halide emissions from southern California coastal salt marshes. *Biogeochemistry*, v. 60, 141–161, doi: 10.1023/A:1019812006560.
- Barth J.A.C., Slater G., Schüth C., Bill M., Downey A., Larkin M., Kälin R.M., 2002, Carbon isotope fractionation during aerobic biodegradation of trichloroethylene (TCE) by *Burkholderia cepacia* G4: A tool to map degradation mechanisms. *Applied and Environmental Microbiology*, v. 68, 1728–1734, doi: 10.1128/AEM.68.4.1728-1734.2002.
- Bill M., Baumgartner P.O., O'Dogherty L., 2001a, Estratigraphía, anomalías geochímicas y extinciones de radiolarios del evento anóxico oceánico del Cenomaniense terminal en el Apenino septentrional y en los Alpes meridionales, *Geotemas* v. 3, 165-168.
- Bill M., Masson H., Thélin P., 2001b, Low-grade metamorphism of the Gets nappe (Western Alps), *Schweizerische Mineralogische und Petrographische Mitteilungen*, v. 81, 229–237.
- Bill M., O'Dogherty, L., Guex J., Masson H., Baumgartner, P.O., 2001c, Radiolarite ages in Alpine-Mediterranean ophiolites: Constraints of the oceanic spreading and the Tethys-Atlantic connection, *Geological Society of America Bulletin*, v. 113, 129–143, doi:10.1130/0016-7606(2001)113<0129:RAIAMO>2.0.CO;2.
- Bill M., Schüth C., Barth J., Kälin R.M., 2001d, Stable Carbon isotope fractionation during abiotic reductive dehalogenation of trichloroethene (TCE), *Chemosphere*, v. 44, 1281–1286, doi:10.1016/S0045-6535(00)00274-5.

Bill M., Nägler T.F., Masson H., 2000, Major, minor, trace element, Sm-Nd and Sr isotopes of mafic rocks from the earliest oceanic crust of Alpine Tethys, Schweizerische Mineralogische und Petrographische Mitteilungen, v. 80, 131–145.

Bill M., Bussy F., Cosca M.A., Masson H., Hunziker J.C., 1997, High precision U-Pb and 40Ar/39Ar dating of an Alpine ophiolite (Gets nappe, French Alps), Eclogae geologicae Helvetiae, v. 90, 43–54.

Bill M., Baumgartner P.O., Hunziker J.C., Sharp Z.D., 1995, Carbon isotope stratigraphy of the Liesberg Beds Member (Oxfordian, Swiss Jura) using echinoids and crinoids. Eclogae geologicae Helvetiae, v. 88, 135–155.

### ***GOVERNEMENT/TECHNICAL REPORTS***

Conrad, M. E., and Bill M., 2008. Using Nitrogen and Oxygen Isotope Compositions of Nitrate to Distinguish Contaminant Sources in Hanford Soil and Groundwater. Lawrence Berkeley National Laboratory, report 1020E, 9 p.

Conrad, M. E., and Bill M., 2008. Carbon Isotope Signatures of Hydrocarbon Compounds in Groundwater from the Fisherman's Wharf Site, San Francisco, 5 p.

Bill, M. and Meusy, J.-P., 2004, Décharge industrielle de Bonfol – Projet d'assainissement: Prise de position, République et Canton du Jura, Officice des Eaux et de la Protection de la Nature (OEPN), St-Ursanne, 90 p.

Buser, M., Wildi, W. with a preface of Bill, M. 2003, Les DNAPLs (Dense Aqueous Phase Liquids) dans l'environnement de la décharge industrielle de Bonfol (Canton du Jura, Suisse), 62 p.

### ***MEETING PRESENTATIONS (BY TOPIC)***

#### **Biogeochemical cycling at present time**

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